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Leukaemia Section

Short Communication

+7 or trisomy 7 (solely)

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Identity

Note

Trisomy 7 is a common finding in benign and malignant solid tumors, in several non-neoplastic lesions (for example, osteoarthritis and rheumatoid arthritis), and in apparently normal tissues as well. Trisomy 7 is found in both acute myeloid leukemia (AML) and acute lymphoblastic leukemia (ALL), but very rarely as the sole karyotypic abnormality.

Clinics and pathology

Disease

Acute myeloid leukemia (AML)

Epidemiology

+7 as the sole anomaly is a rare chromosomal abnormality. Only four cases of AML with isolated trisomy 7 have been described in the literature. These cases show various FAB subtypes including M0, M5a, M1, and M4, and two cases of myelodysplastic syndrome (Hagemeijer et al., 1981; Leverger et al., 1988; Bernell et al., 1996; Taketani et al., 2003).

Clinics

In the four reported cases of AML with trisomy 7, there is no clinical history, laboratory results, nor immunophenotypic studies available for analysis. The two cases of myelodysplastic syndrome with isolated trisomy 7 were a 77 year-old female patient diagnosed with myelodysplastic syndrome and a 75 year-old male patient with refractory anemia with excess blasts - 1 (RAEB-1) who later developed acute myeloid leukemia.

Prognosis

Patients with trisomy 7 seem to have very poor prognosis with the survival time of five months and three months in AML cases. In the MDS cases one patient died three months after diagnosis.

The second patient developed AML two months after the diagnosis of MDS and died four days after his AML was diagnosed.

Disease

Acute lymphoblastic leukemia (ALL)

Epidemiology

+7 is very rare as a sole chromosomal abnormality in ALL.

Only three cases of ALL with isolated trisomy 7 have been previously described in the literature.

Patient ages range from 8 months to 44 years old. No detailed clinical and pathological information is available for review (El-Rifai et al., 1997; Whitehead et al., 1998; Ameye et al., 2000).

Prognosis

The prognosis of ALL with trisomy 7 is unknown, largely due to the rarity and lack of follow up of this entity.

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